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CONTRASTING CHARACTERISTICS OF HUMAN CAPITAL IN THE MODERN BULGARIAN STATE ADMINISTRATION

ABSTRACT

The aim of the study is to reflect on peak moments in the functioning of the contemporary Bulgarian state administration, which recognize the horizontal and vertical boundaries within which it functions. Outside of these constraints, the administration either underutilizes its resources or processes of chaos take hold, necessitating radical decision-making and implementation.

The starting point of the understanding of the contrasts is the evolving base of the public administration: the normative and the regulation (as an expression of the policy pursued), the conditions available for the implementation of the activity (organizational and social mechanism), and the human capital functioning in it (employees). These three elements in unity create the prerequisites for the performance of administrative functions in creating services for citizens, businesses, and other institutions.

KEYWORDS: State administration, Human capital

JEL: H83, J24, J45

INTRODUCTION

The Bulgarian state administration is in turbulent development and self-assertion. If at the beginning of the century it was actively "breaking new ground" under new conditions, a quarter of a century later it can be said to be functioning as a modernizing administration, which is an important factor in the reproduction of services and in supporting social and economic growth, including by creating conditions for the development, implementation, and improvement of the regulatory framework for all spheres of life.

The methodological basis of the searched marginal fields are: the classical methods (analysis, synthesis, induction, deduction, comparison, etc.), the geometric mean supplemented with the use of the relative weight of the individual structural components, the consideration of the individual breaks (conditioned by high and low values), the use of empirical information from the annual reports on the state of the public administration, the summarization of the main facts found, and the targeted orientation of the research in the context of the person employed in the administration.

This approach produces an inventory of sought-after minimax states in which contain a number of qualitative findings: the trend towards feminization, which stems from the nature of the work performed and men's demand for higher pay than that offered by the civil service; the drive towards very high levels of education for employees, stemming from the importance of the functions performed and the direct work with citizens, business, and management staff; the threatening of staff rejuvenation is an inertial process that does not bode well for the future of the civil service; the marginalization of performance appraisals by employees, etc.

They are summarized as a form of manifestation of the problems that need to be reflected on and, if possible, in a proactive context, addressed carefully and with consideration of the interests of all concerned.

1. UNDERPINNING INSTRUMENTS OF MODERN ADMINISTRATIVE TRANSFORMATION

In the overall process of the functioning of public administration, three systems are its developmental basis: the legal framework, the conditions for the implementation of activities, and the human capital functioning in it.

The established regulatory framework of administration is periodically updated in relation to changes in theory and practice (Krusteva, 2024a, p. 53): Law on Administration (adopted in 1998 and has so far undergone 29 amendments, 6 supplements, and 1 simultaneous amendment and supplement), Law on Civil Servants (adopted one year later and has undergone 42 amendments, 6 supplements, and 13 simultaneous amendments and supplements), Ordinance on the implementation of the classification of posts in the administration (adopted in 2012 and updated 10 times as an amendment, 7 times as an addendum and 6 times as a simultaneous amendment and addendum), the Regulation on the salaries of civil servants adopted in the same year (24 amendments, 7 supplements, and 7 simultaneous amendments and supplements), etc. The drive to create robust regulators of administration processes is evident.

Our state administration has a well-established material, technological, communication, and information base. For the last 12 years, the number of PCs (report on..., 2012, p. 56 and 2023, p. 31) has increased from 100655 in 2012 to 156006 at the end of 2023, with the share with a process frequency above 2GHz decreasing from 50.60% in the base year to 9.61% in 2023, the one with process frequency below 2GHz from 28.80% to 3.24%, and the one with 64bit address purity increased from 17.90% to 82.90%. During the same period, the number of servers increased by 4042 and the number of printers by 30146. In 2023, there are already 131703 licenses of Windows OS etc. in use (95677 in 2012) and 154366 licenses of Microsoft Office OS etc. in use (65677 in 2012). The number of websites, portals, social media pages, mobile applications, etc. is growing significantly. Building stock and server rooms are expanding.

In 2023, there are (reports on..., 2012, pp. 58-59 and 2023, pp. 43-44) 885 LANs, 155 administrations (96 in 2012) are connected to the Unified Electronic Communications Network. In the last interpreted year, the used (active) telephone numbers were 141935, of which 51.91% were fixed, 37.77% mobile and 4.2% combined.

The number of intra-agency information systems is increasing (.... report, 2018, pp. 28-31; 2029, pp. 29,32-33; 2023, pp. 46-51). Among them, the highest coverage is with Labor and Payroll Systems (98.5% of organizations have such systems), Human Resource Management Systems (97.6%), Document Management Systems (96.1%), etc. Administrative information systems for complex administrative services are not implemented fast enough (now only 32.5% of administrations have such systems), Database Management Systems (55.2%), Accounting System (55.2%), etc. Necessary steps are being taken for implementation and normal functioning of Information System for Exchange of Reference and Certification Information, e-Authentication System, e-Payment Systems, e-Forms Systems, etc. In 2023, the number of requests made to the registry is 119933293 compared to 5500000 in 2018, the number of administrations connected to the e-payment system in the final year is 120484 compared to 3935 in 2019, etc.

Intensive work is also being carried out in the area of quality (reports on..., 2023, pp. 52,54 and 55): in 2023, the job descriptions of 93% of the administrations reported contained duties, responsibilities, and requirements for quality management; in 85.17% of them the needs are analyzed and the qualification of the employees is improved, in 80.91% the regulatory deadlines for service are met, etc. There is still room for improvement: only 32.89% of organizations use a quality management system.

The third systemic element of the functioning of the modern Bulgarian administration is human capital. Its meaningful aspects are manifested in all spheres and activities, as, together with nature, are the two energetic sources of proactive work behavior. In another aspect (Krusteva, 2024b, pp. 21-49) this capital is the basis of the intangible capital triad (human-social-organizational capital). The magnitude of this asset at a large scale is recognized by the number of staff employed according to reporting data. If (report on ..., 2012, p.14, 2015, p. 16, 2016, p. 10, 2023, p. 24) for 2012 it is 133575, and 12 years later, it is 131496. It is interesting to note that, as a percentage of the staffing establishment, this number fluctuated from 86.4% (2015) to 95.6% (2016). The prevailing proportion in the last 7-8 years has been around 91-92%.

The brief overview of the main features of the modern Bulgarian state administration from the adopted points of view are unambiguously indicative of: first - the scale of the modern system formed to support the creation (and at the same time - to implement) regulators for the administration of activities in the complex of the Bulgarian public system; second - the achievements are impressive, as they have been made using the theory and best practices at home and abroad and with the help of the EU; third - a number of contradictions have been generated, which are gradually being overcome over time and with consideration of public interests; fourth - in the context of digital transformation, e-government is increasingly determining the quality of activity, which is why it has emerged as an undisputed engine of administrative well-being; fifth - the evidence (positive and negative) that human capital is a major contributor to growth, and its level and trends are therefore the subject of increasing attention from policy makers and the research guild.

2. ZIGZAGS OF THE PRESENCE OF HUMAN CAPITAL IN PUBLIC ADMINISTRATION

Each process is characterized by a number of indicators that recognize its purpose, genesis, environment, structure, state, intensity, dynamics, trends, priorities, breaks, etc.

The careful study and practical observation of human capital in public administration allows, in the aspect of the design of the present study, to summarize several important methodological elements.

- a) For the measurement of the average value of this capital, it is most acceptable to use the indicator "average annual geometric rate of development (respectively, of growth)" as it most accurately recognizes the speed (annual growth with the same multiplier), the momentum of the movement, and the multidimensionality of the impact of the processes: building up, transition states, etc. In this sense, the global calculation of the human development index was at first carried out as an arithmetic mean between its constituent components but subsequently switched to the use of a geometric mean.
- b) The relative weight (structural weight) of individual factors is a reasonable complement to human capital research through a geometric path. The questioned weight from one point of view is indicative of extensive development (as a reflection of the absolute, quantitative increase of the factor under study, respectively, and of its relative weight). It is possible that the absolute increase is accompanied by a relative decrease in the share (i.e. intensification of the processes), and vice versa.
- c) In another aspect, each calculated share can be interpreted with the characteristics of a qualitative process indicator. A typical case is staff turnover, which is also a share and indicates the movement of staff in relation to the departure of some of them from the job they perform.
- d) It is also necessary to recognize the breaks in the development trajectory: continuous increase or decrease, momentary marginal peaks, etc. Usually the study of these things implies additional (sometimes goal-oriented) analysis, so they will only be hinted at in the present exposition. Their social, economic, psychological, psychophysical, and other basis can be the subject of independent research.
- e) The sources of information for this analysis are annual reports on the state of the administration in terms of human capital input, training topics, performance evaluation, etc.
- f) In a contrastive profile, a complex of antipodal working concepts is used: increase-decrease; activation-deactivation; priorities-lack of priorities, etc.

Against this background, several interesting points can be highlighted in the contrasting picture of human capital (Report on..., 2012, pp.14-16; 2013, pp.13-15; 2014, pp.14-16; 2015, pp.16-17; 2016, pp.10-11; 2017, pp.10-11; 2018, pp.13-14; 2019, pp.13-14; 2020, pp.14-15; 2021, pp.9-12; 2022, pp.10,15;2023, pp.13, 18).

The first relates to the employed headcount by gender: over the period studied, women grew at an annual average geometric growth rate (shown hereafter only as "growth rate") of 0.35%, while men declined at a growth rate of minus 0.65%. In this sense, if the percentage of employed

women in 2012 was 48.7%, 12 years later it was already 51.4% (Report on..., 2012, p. 14, 2023, p. 24). The reversal of the trend is evident by 2013. Apart from the nature of the work performed (sparing the human physique, humanized work, socially significant features of the work performed, etc.), the tendency towards feminization of the personnel employed is also linked to the still low pay, which discourages men who prefer "rougher" and "harder" but well-paid work.

The second point refers to the clear priority of increasing the number of employees with higher education and reducing the number with secondary education.

The growth rate of higher education over the 8-year period studied was 1.86%, while that of those with secondary education was minus 1.56%. The increase/decrease is absolute and relative. For employees with higher education, the absolute increase is 10150 people, respectively their share increases by 5.5%, and for those with secondary education the absolute decrease in their number is by 5442 people and their relative weight by minus 5.7%. Interestingly, in 2020, compared to the previous year, the number of higher education decreases by 2,825 and those with secondary education increases by 2,784. After this year, the trend of increasing the number of higher education and decreasing those with secondary education has normalized. The movement of the number of employees at these two levels of education operates on the principle of stacked vessels, with employees with primary education having no significant impact in this process. Their relative weight is about 0.5% of the actual staffing, although their number tends to increase (by 92 persons) during the year of active Covid consequences. Whether this movement is the result of insufficient consideration by high school graduates of the present harmful effects of the pandemic is a matter for future study.

The third point relates figuratively to undervaluing staff renewal with young reliable staff, which is a specific "stealing/undervaluing the future".

The formed age structure does not satisfy. In 2023, compared to 2016, the growth rate of the number of employees under 29 years of age is minus 6.57%. The overall decrease is by 4506 people. The relative share of this contingent in the number of employees falls from 9.4 in 2016 to 5.6% in 2023. Young people are definitely looking for a job with high remuneration, a favorable microclimate, guaranteed career and professional growth, social benefits, all circumstances that do not make public administration prestigious.

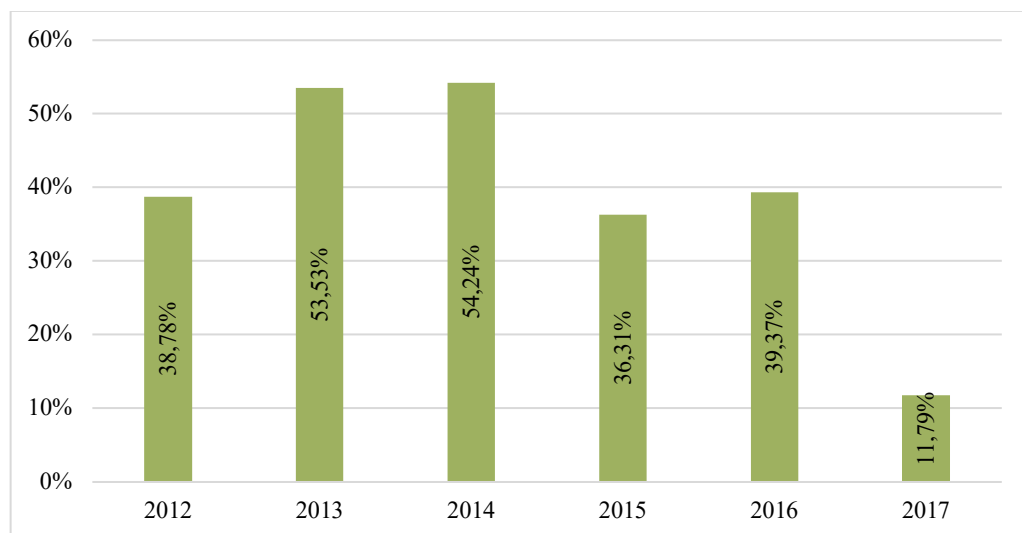
The mainstay of the staffing potential (84.4% of employees in 2023) are employees between the ages of 30 and 59. Their number compared to that in 2016 increased by 4,344 employees (on average 620 employees per year), the growth rate is 0.57%. Their relative weight ranges between 84% (2016) and 84.9% (2021).

Practice shows that a new age source of employees is being formed - those aged 60 and over. The growth rate for this contingent is 6.76%. The number of employees increased by 4 874, an average of 696 employees per year. Their relative share increases from 6.6% in 2016 to 10% in 2023. To a very large extent, this is due to the widespread idea of "active aging".

In this group, three things deserve particular attention. Information was used for the period 2012-2017 (... report, 2012, p. 26; 2013, pp. 25-26; 2014, pp. 26-27; 2015, p. 26; 2016, p. 19, 2017, c. 17). Attempts to update it have not been successful. Nevertheless, we expect that the fixed trends have been maintained.

- a) The number of retired employees who became eligible for a pension in current and previous years but continue to work increased from 1,970 to 6,382, and their relative weight increased from 1.5 per cent to 4.9 per cent of the number of employees for that year. The growth rate of this process is 26.5%.
- b) The average annual number (respectively, the share) of retired and then immediately appointed employees is growing dynamically: from 1206 (0.9% of the number of actual employees in 2012 to 5626) 4.3% in 2017, which is equivalent to a growth rate of 36.08%.
- c) If at the beginning of the study, of all those who became eligible for a pension in the current and transition year but continued to work, a significant proportion remained in the job they had previously held, this changed radically towards the end (Figure 1).

Figure 1. Proportion of those who retired (in the current and previous years) but remained in their job



Source: State of the administration report (2012, pp.14-16; 2013, pp.13-15; 2014, pp.14-16; 2015, pp.16-17; 2016, pp.10.11; 2017, pp.10-11; 2018, pp.13-14; 2019, pp.13-14; 2020, pp.14-15; 2021, pp.9-12; 2022, pp.10, 15; 2023, pp.13, 18

It is obvious that retirees are a kind of resource (of qualifications and experience) that can be used rationally. But it cannot be a strategy to cover the shortage of staff and especially to compensate for the lack of young and dedicated administrative staff.

The fourth point relates to difficulties with performance assessment (Report on..., 2012, pp.18-19; 2013, pp.17-18; 2014, pp.18-19; 2015, pp.18-19; 2016, pp.12-13; 2017, pp.12-13; 2018, pp.15-16; 2019, pp.15-16; 2020, pp.17-18; 2021, pp.15-16; 2022, pp.17-1, 2023, pp.20-22).

The situation deserves careful analysis, as it contains latent problems. This is further reinforced by the fact that the levels of appraisals given are system-shaping (directly or indirectly) of: the quality of work performed, the career development of employees, the formation of their remuneration, the prestige of the administration, etc.

- a) In the 12-year period studied, estimates between 61898 (2015) and 70419 (2022) were made annually. On average, the arithmetic proportion of these assessments in the number of those eligible for assessment is 91.17%.
- b) The number of people rated as "Outstanding Performance" increases from 2,120 in 2012 to 9,603 in 2023. In relative weighting, the increase is from 3.1% to 13.7%. In relation to this, the rate of increase in grades is 14.72%.
- c) The number of evaluations under the criterion "Performance exceeds requirements" increased from 26261 to 37371, in a relative share of 38.5% to 53.3%. The growth rate is 3.25%.
- d) The number of evaluations under the criterion "Fully meets the requirements" decreased from 37981 to 22430, and as a proportion from 55.7% to 32%, respectively. The growth rate is minus 4.68%.
- e) (e) The number of marks for the criterion "Performance does not fully meet the requirements" decreased from 1539 to 547 and the growth rate was minus 9.25%.
- f) For the last criterion "Unacceptable performance", the above figures are 186 and 118, respectively, 04% and 0.2%, and the growth rate is minus 4.06.

For the period studied, the total number of assessments has a growth rate of 0.25%.

In summary, it can be stated that:

First, there is a dramatic increase in the scores on the first two criteria from 28373 to 46974, respectively, from 41.6% to 67%. This increase is at the expense of a decrease in the scores for the other criteria.

Second, these conclusions are also valid when taking into account the increase in the number of evaluations (between the start and finish year it is 1931).

Third, the hypotheses for the analyzed situation can be several: radical increase in the quality of work of employees (practical realization of the human capital engaged in the public administration); Insufficiently "tense"/lower scale on which the evaluators place their ratings; leniency on the part of the evaluators towards the employees, given the low demand for jobs in the civil service; strengthening the incentive moment of the evaluation for the performance of employees, etc.

In addition to these expectations, it can be added that the increase in absolute and relative high scores is an expression of the equally increased quality of the complex administrative service. Whether this is the case can only be ascertained after specific analyses have been carried out.

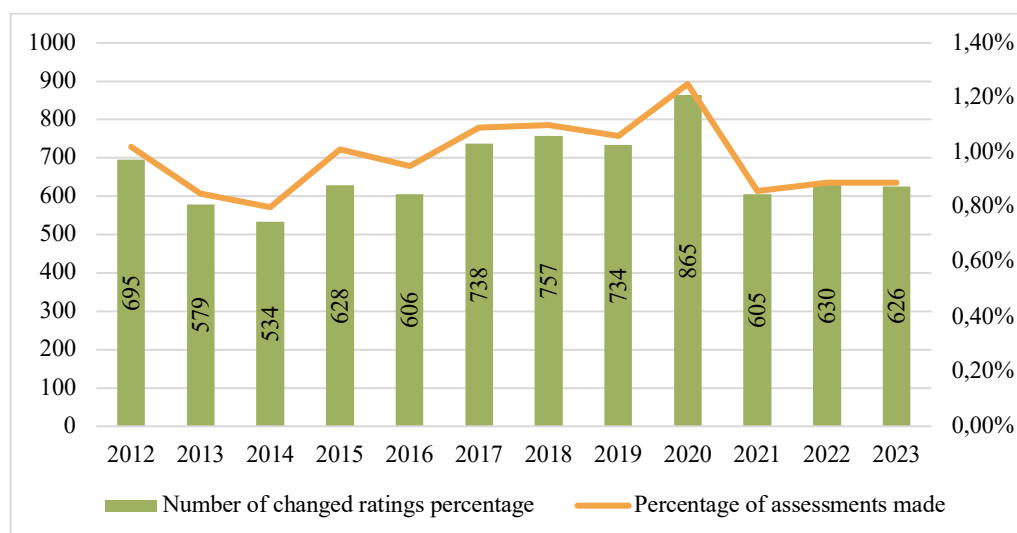
In the process studied, it is important to take into account both the quality of work of the evaluation and supervising manager and the self-assessment of individual employees.

- a) There has been an increase in the number of appraisals for which the supervisor has requested additional information by 2018 (from 284 to 443, a percentage increase from 0.4% of the total number of appraisals to 0.6%). After this year there is a reduction, the number in 2023 being 118, which is 0.2% of the number of estimates made. Over the whole period, this reduction is at a growth rate of minus 7.68%. This indirect interference is difficult to make sense of without a thorough analysis. It is not clear at

what number of these assessments there is a maintenance, increase, or decrease in their final level.

- b) The direct intervention is reflected in the total number of estimates changed by one unit up or one unit down (Figure 2).

Figure 2. Total number of changes of one unit up and one unit down by the supervising manager



Source: State of the administration report: 2012, pp.18-19; 2013, pp.17-18; 2014, pp.18-19; 2015, pp.18-19; 2016, pp.12-13; 2017, pp.12-13; 2018, pp.15-16; 2019, pp.15-16; 2020, pp.17-18; 2021, pp.15-16; 2022, pp. 17-1, 2023, c. 20-22.

The conclusion is that the primary responsibility for the grades awarded lies with the assessment manager. At the same time, the supervising supervisor, within about 1% of the evaluations made, makes reasonable adjustments.

It should be noted that the number of evaluations in which the supervising supervisor changed one unit had a growth rate of 0.60 and those that changed one unit had a growth rate of minus 2.69%. This is an indication of high-quality assessment.

- c) The regulations allow employees who are dissatisfied with their evaluations to file written objections. Their number increased over the period under review at a growth rate of 1.30%. In 2012, 242 employees filed objections, for 2017 the number was 518 and for the final year 279. For the last 4 years, their share of the total is between 0.4 and 0.5% of the number of assessments made.

The quality of the self-assessments carried out by the objecting officers is recognized by the decisions of the supervising manager. The number of upheld appraisals following objections submitted has a growth rate of 5.75%, i.e. objections are not recognized (in 2012 they accounted for 50% of objections raised, and in 2023 they accounted for 80.2%). The number of evaluations that were changed up by one unit decreased by minus 0.19% (in the starting year they accounted for 40.5% of the number of objections made, and in the final year they accounted for 34.4%), and the number of evaluations that were changed down by one unit decreased by minus 13.82% (in the last three years studied they accounted for 4, 6 and 7 cases, respectively).

Furthermore, it can be stated that the Bulgarian public administration faces significant challenges related to the politicization of recruitment processes and limited meritocratic selection (European Commission et al., 2018). Despite the existing legal frameworks that should ensure neutrality, appointments are often based on political affiliation, which compromises the professionalism of the public sector (BTI Project, 2024; European Commission, 2023). In terms of human resources, despite the high educational level of public sector employees, there are significant gaps between formal qualifications and practical skills needed for effective management. Insufficient funding and the lack of targeted professional training programs limit the ability of the administration to adapt to the dynamic requirements of modern management (OECD, 2023; SGI Network, 2022).

Modernization of Bulgaria's public administration is uneven, and innovation initiatives often hampered by bureaucratic obstacles and a lack of technological skills among human resources. An OECD report (2023) identifies a slow process of adaptation to e-government and the uneven distribution of digital competencies among civil servants as key factors limiting the effectiveness of administrative services.

Bulgaria's position in international human capital and governance indices reveals significant weaknesses. The World Economic Forum (2020) and the World Bank (2022) highlight the insufficient development of human capital as a major obstacle to achieving efficiency in public administration.

CONCLUSION

The general conclusion is that the criterion system needs to be carefully thought through after a thorough analysis. Bulgaria's state administration is at a pivotal crossroads, embodying significant achievements tempered by systemic deficiencies. Its modernization trajectory, marked by the integration of advanced technological infrastructures and the expansion of e-government services, demonstrates a firm commitment to aligning with global administrative benchmarks. However, critical challenges persist, particularly in the recruitment and retention of younger professionals, the meritocratic integrity of appointment processes, and the refinement of performance evaluation systems.

This study underscores the indispensable role of human capital as both the cornerstone and catalyst of administrative efficiency. However, the observed demographic shifts, including aging and feminization, coupled with persistent gaps in practical competencies, require urgent evidence-based policy interventions. The interplay of digital transformation and human resource optimization must be strategically harnessed to address these deficits, ensuring resilience and adaptability in governance.

As the administration confronts these challenges, its ability to harmonize innovation with inclusivity will determine its ability to navigate an increasingly complex public sector landscape. Strengthening these foundational elements is essential to sustain the administration's transformative momentum of the administration and ensure its role as a driver of Bulgaria's socio-economic progress.

Public administration functions effectively in the context of modern transformation. At the same time, the contrasts generated are the product of both mistakes and changes in the environment, not only as expected difficulties but also as unforeseen force majeure.

The idea is to "run away" from problems, not after them.

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